

**METHOD AND SYSTEM FOR INFORMATION HANDLING SYSTEM  
POWER CONTROL**

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**ABSTRACT OF THE DISCLOSURE**

Power supply response to variations in power demand by a microprocessor is improved with a compensation loops that estimate changes in load current with improved speed. The load current estimate is performed in part with a capacitance  
10 feed forward compensation loop that senses voltage at output capacitors to replicate the current present in the capacitors and communicates the capacitor current adjusted by an optimized gain to the power supply for adjustment of power output. Capacitor current is replicated with a frequency domain filter having a pole that cancels out the zero created by power supply equivalent series resistance and capacitor capacitance.  
15 The capacitance compensation loop improves power supply response time to microprocessor power demand skews so that the size or number of output capacitors may be reduced while still maintaining power supply at the microprocessor to within desired voltage and current tolerances.